

AN ANALYSIS OF SOFTWARE
PRODUCT OPPORTUNITIES IN THE
DEC MARKET

INPUT

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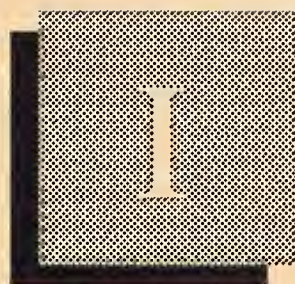
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Introduction





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Introduction

This report analyzes the opportunities for independent software vendors marketing products for commercial use at DEC installations.

The DEC installations that were interviewed as part of the analysis included 10 or more of each of the following types:

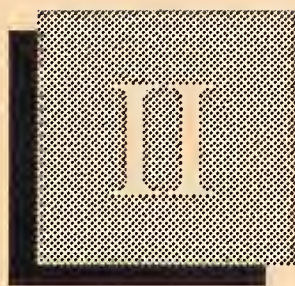
- Where DEC computers are used in an IBM mainframe environment.
- Where DEC computers are used as departmental processors.
- Where DEC has supplied the main processor for the company.

The issues that were explored with DEC installations are reflected in the interview document shown in Appendix A, which was reviewed with On-Line Software.

Seventy-six percent of respondents were involved in the management of the installation. The others were technical analysts or managers of the central IS group in the respondent organization.

The list of companies interviewed is included in Appendix B.

Section II provides an executive review of findings together with impressions of the DEC marketplace gathered from the interviews as well as contacts with vendors. Recommendations are also included in this section. Section III contains a summary of the interviews.



Executive Overview





Executive Overview

A

Findings

DEC computers have been acquired for a busy environment that is looking for an economic on-line or terminal-oriented system.

It was more difficult to arrange and complete interviews, in most cases, with IS organizations concerned with mainframes since the managers or staff of the DEC installations were involved with operations or application tasks rather than with management or administration.

Almost 30% of users claimed that applications dictated the choice of DEC equipment, but the applications in all, or practically all, cases depended on the use of economic on-line data entry and/or query capabilities.

Systems software particularly and applications software have not been selected with as much review or attention to standard procedures in DEC installations as they generally are in an IBM or other mainframe environment. Advice from DEC or just meeting current needs have been significant influences in obtaining software products. In this type of environment, DEC has dominated software selection.

- About 60% of respondents report that advice from DEC determined their use of system software.
- DEC guidance was the means for at least 30% of respondents to learn about vendors for applications software. It appears that many of the other vendors and applications were also brought to the attention of users by DEC or DEC users.

It would seem that a software vendor should have good relations with DEC or DEC users or have an established presence in other markets in order to attract DEC users.

DEC influence will be less of a factor in regard to future application development; however:

- Ninety-six percent of respondents plan to consult sources in addition to DEC for future application needs.
- An analysis of price and performance will be carried out more often on future plans versus original application selection (44% of respondents versus 16% of respondents).

There is an opportunity for IS vendors in the DEC market. Eighty-one percent of respondents expect to use vendors for further application development work in the next five years, and they will spend an average of \$96,800 in these activities, although some expect to spend very little. Two respondents planned expenditures, in one case of \$500,000 and the other of \$1,000,000, for accounting-related work.

- Respondents will be looking for software packages primarily in order to reduce development time.
- Development work will be done to customize software in most cases.

The work that is planned will be accounting-related or financial in nature for 78% of respondents who have expenditures planned. Twenty-nine percent of this group of respondents displays interest in DBMS products as well. (Plans for DBMS were discussed in relation to applications rather than in relation to system software needs.)

An analysis of respondents who plan expenditures reveals that the average amount planned is about 60% greater for DEC equipment that is part of a mainframe complex.

Vendors will be sought for application and DBMS products through a variety of sources including publications, catalogs, and directories for about 76% of respondents planning expenditures. Vendors interested in the DEC market should consider advertisements, articles, and other means to be mentioned in general systems publications and DEC-oriented directories and catalogs.

Discussions with vendors and respondents led to estimates of the 1986 revenue for DEC software of \$795 million:

- \$468 million in systems software.
- \$327 million in applications software.

Since this market is growing at an AAGR of about 25%, it will amount to at least \$2.4 billion in 1991.

There are also DEC software packages supplied by professional service firms which are not included in total estimates since they have limited use and are more like custom projects.

B

Recommendations

INPUT recommends that On-Line Software further investigate the market for application and DBMS software in DEC installations with a view toward introducing products. Provided that the right products are chosen for the market, it is sizable enough to offer opportunities.

DEC installations plan to use vendors to add to their applications, and they are becoming more independent of DEC in selecting vendors.

DEC users with commercial applications report that they are most interested in accounting and financial applications and the use of DBMS in the future. However, DEC users also appear to be heavily oriented toward a type of equipment use as well as a set of applications or an application area.

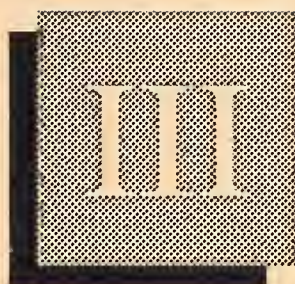
- The users were terminal-oriented and interested in query and data entry functions to a great extent.
- There was a strong feeling that solutions to particular problems or functional needs were the main focus of computing utilization.
- Capabilities were not evaluated in relation to centralized corporate goals unless the installation was the main computer of a company.

Vendors planning products for existing DEC users or new ones should be exploring means of capitalizing on or improving interactive use and user-friendly capabilities while providing a higher level of capability in regard to DBMS utilization, integrated accounting, or more complex accounting or financial systems.

It also could be wise to analyze user problems or the work of professional service firms to find out if it is possible to forecast application areas or corporate functions that will utilize a DEC solution.

Based on vendor contacts, it appears that there is need for an on-line transaction processing capability that could process transactions at a relatively fast rate while posting a data base.

Advertisements, articles on software products, contacts, and even listings in catalogs should stress that software products offered to the DEC market contribute to a solution which is easy to use as well as economical.



Review of DEC Installations





Review of DEC Installations

A

Respondent Profile

A list of the industries of respondents is included in Exhibit III-1. An effort was made to obtain interviews in a variety of industries, but also to include multiple interviews for industries that are heavier users of IS.

The types of respondents are shown in Exhibit III-2.

The reasons for selecting DEC emphasize on-line or terminal-oriented usage and economy, as shown by Exhibits III-3, III-4, and III-5. Most of the applications mentioned in Exhibit III-5 are on-line oriented.

The specific commercial applications running on DEC equipment that users mentioned are listed in Exhibit III-6. An analysis of these applications, as shown in Exhibit III-7, revealed that accounting-related work was most frequently encountered.

EXHIBIT III-1

INDUSTRY OF RESPONDENTS

INDUSTRY	NUMBER OF RESPONDENTS
Banks	4
Other Financial Services	4
Communications	1
Energy	1
Insurance	1
Medical	2
Manufacturing	
- Discrete	2
- Process	4
Newspaper	1
Organization	1
Retail Distribution	3
Service	4
Science/Engineering	3
TOTAL	31

EXHIBIT III-2

TYPES OF RESPONDENTS

TYPE	NUMBER OF RESPONDENTS
DEC Computer(s) is Main Computer	11
DEC Computer(s) is Departmental	10
DEC Computer(s) is Part of Mainframe Complex	10

EXHIBIT III-3

REASONS FOR SELECTING DEC

REASON	RESPONDENTS (Percent)
Application Related	29
Equipment Capability	71

EXHIBIT III-4

**EQUIPMENT CAPABILITIES
RESPONSIBLE FOR DEC SELECTION**

REASON	RESPONDENTS (Percent)
On-Line Operation Needed for Applications	29
Terminal Orientation	13
Economy and Terminal Orientation	13
Economy	13
Interface to Other Equipment	3
TOTAL	71

EXHIBIT III-5

**APPLICATION REASONS FOR
CHOOSING DEC**

APPLICATIONS	RESPONDENTS (Percent)
Retail Accounting	3
Scientific Software	7
Cardiology Subsystem	3
CAD/CAM	7
International Lending	3
Customer Service	3
Trust	3
TOTAL	29

EXHIBIT III-6

COMMERCIAL USES OF DEC EQUIPMENT

Retail Accounting, Payroll

Accounting, Payroll

Word Processing, Electronic Mail,
Administration

Billing, Credit Union Accounting

Phone Company Accounting/Analysis,
Word Processing

Accounting

International Lending, Foreign Exchange
Trading

Accounting, Sales Order Processing

Electronic Mail, Customer Information
Analysis

Customer Service (Order Processing)

Personal Trust

Accounting, Inventory

Accounting, Personnel, Payroll, OA

Hospital Administration

Insurance Pension

Customer Service (Data Collection)

Accounting, Sales

Finance, Purchasing, Inventory

Accounting, Order Processing, Inventory

Administration, OA

Marine Transportation

Accounting Analysis

Equity Analysis

Collections

Departmental MIS, Administration, OA

Accounting, OA

Correspondent Banking

Accounting, Personnel

Retail Accounting, Billing

Administration, OA, Desktop Publication

Option Trading

EXHIBIT III-7

ANALYSIS OF USER AREAS

APPLICATIONS	RESPONDENTS (Percent)
Accounting-Related	45
Other Standard Business Applications (Collections, Purchasing, Administration, Customer Service)	23
Specialized Financial Applications (International Lending, Personal Trust, Pension Equity Analysis, Correspondent Banking, Option Trading)	19
Office Automation, Electronic Mail, Administration	10
Other (Marine Transportation)	3
TOTAL	100

B**System Software Use**

DEC dominates the use of operating systems by respondents, as shown in Exhibits III-8 and III-9.

- DEC VMS is used at 84% of the sites.
- Only one vendor other than DEC is utilized.

Most respondents ask for or obtain guidance from DEC in their plans for operating systems or other system software. Advice from DEC led to a decision for the operating system in almost all cases. Respondents did not find it meaningful to explore other choices or decision criteria.

About 19% of respondents appear to have a data base incorporated in their application systems, but they did not discuss this software as part of their systems software.

Almost half of respondents plan to enhance their operating systems, as shown in Exhibit II-10. This exhibit indicates that at least 13% of respondents also plan to obtain DBMS products. When future applications were discussed, a higher percentage of users indicated that they would obtain a DBMS product.

Advice from DEC will continue to be the leading decision factor, as shown in Exhibit III-11, as well as the source that most respondents think of for advice on system software. Seventy-eight percent of respondents with plans for system software will use DEC as a source for ideas.

EXHIBIT III-8

OPERATING SYSTEMS IN USE

VENDOR	SOFTWARE	PERCENT
DEC	VMS	68
DEC	VMS and Another Product (UNIX, RSTS, MUMPS)	16
DEC	RSTS	10
DEC	TOPS	3
MCBA	TSX	3
	TOTAL	100

EXHIBIT III-9

**HOW WERE DECISIONS MADE ON
SYSTEM SOFTWARE IN USE**

MEANS	RESPONDENTS (Percent)
Discussions with DEC	81
Contacts Who Used DEC	32
Past Experience with DEC	25
Contacts with Other Vendors	13

Total is over 100% since some respondents mentioned more than one.

EXHIBIT III-10

**SYSTEM SOFTWARE PLANS
(FOR NEXT FIVE YEARS)**

PLANS	RESPONDENTS (Percent)
No Plans	38
Operating Systems*	42
Enhancement	
Not Sure	10
Other	10
– 1 VMS and a DBMS	
– 1 DBMS	
– 1 DECnet	

*2 mentioned possible DBMS expenditures also

Average amount to be spent in next 5 years for those with plans: \$30,600

EXHIBIT III-11

DECISION FACTORS FOR SYSTEM SOFTWARE	
DECISION FACTORS	RESPONDENTS WITH PLANS (Percent)
Advice from DEC	69
Review of Needs	16
Analysis of Price and Features	5
Capabilities of Software	5
Consultant Advice	5
TOTAL	100

C

Means of Developing Applications

As Exhibit III-12 shows, 68% of respondents used application packages or development work together with application packages. The development work was customization of packages in all but one instance. In that case, the vendor who supplied a software package developed other applications as well.

Exhibit III-13 lists application packages in use and the vendors involved.

DEC guidance was a strong factor in selecting vendors and packages, as shown in Exhibit III-14, although other sources are used more often than in the selection of system software.

The reasons for selecting application packages indicated in Exhibit III-15 show less reliance upon DEC as well.

EXHIBIT III-12

**MEANS OF DEVELOPING
APPLICATIONS**

MEANS	RESPONDENTS (Percent)
Developed Own Applications	32
Used Application Packages	52
Used Packages and a Developer (To Customize or Add Applications)	16
TOTAL	100

EXHIBIT III-13

APPLICATION PACKAGES IN USE AND SOFTWARE VENDORS INVOLVED

PACKAGE(S)	VENDOR
Purchasing, Accounting, Payroll	MCBA
Inventory, Distribution, Purchasing	SCI
Accounting, Payroll, Inventory	Collier Jackson
Accounting	McCormack & Dodge
Information Retrieval	DEC
Spreadsheet (Digicalc)	Wyse
MASS II, Specialized Word Processing	Microsystems Engineering
Accounting, Purchasing, Payroll	DEC
Project Management	BSO
Billing	IDX
Credit Union Accounting	SCA
Phone Accounting/Analysis	Bellcore
Project Management	McDonnell Douglas
International Lending	ARBAT
Sales Order Processing, Accounting	DEC VARs
Inventory, Order Processing, Invoicing, Dispatching, Service	Data Group
Trustware	NCS
Hospital Administration	Shared Medical (SMS)
Insurance Pension	DEC and DEC VARs
All-in-One and Utilities for Mailing and Tracking	DEC
Word Processing, Tracking, Scheduling	DEC

EXHIBIT III-14

**HOW DID RESPONDENTS LEARN
ABOUT VENDORS**

MEANS	RESPONDENTS WHO USED VENDORS (Percent)
Contacts and Publications or Magazines	32
DEC Guidance	29
Heard About or Knew of Vendor	29
Recommendation of Contact	5
Consultant	5
TOTAL	100

EXHIBIT III-15

REASONS FOR SELECTING PACKAGE

REASON	RESPONDENTS WHO USED VENDORS (Percent)
Met Needs	41
Price/Performance	16
Functionality of Software	11
Knew Vendor Package	11
Proven Software	11
Runs Former Time-Sharing Work	5
ORACLE-Based Applications	5
TOTAL	100

D**Future Applications Plans**

Eighty-one percent of respondents expect to use software packages or professional services to upgrade or add to their application software, as shown in Exhibit III-16. Users do not want to commit themselves to the use of specific new packages or development work but the inclination is to obtain packages.

The expenditures that respondents expect to make are noted in Exhibit III-17. An analysis of these expenditures, shown in Exhibits III-18 and 19, suggests that expenditures are higher where DEC equipment is used as part of a mainframe complex.

The work that is planned for the two installations where the level of anticipated expenditures is highest is accounting-related. On an overall basis for installations where there is a level of expenditures anticipated,

work on accounting-related applications is planned, as shown in Exhibit III-20.

Exhibit III-20 also shows that DBMS will receive increasing attention in the next five years. Respondents mentioned DBMS in relation to application needs rather than software capabilities. Vendors selling DBMS to DEC users may have to focus on the uses of DBMS to develop interest.

DEC guidance will have less of an impact on applications software selection in the future, as shown by Exhibit III-21. Users will consult publications, catalogs, industry contacts, and other sources.

Price/performance or analysis of needs will be the selection criteria for users who obtain software, according to Exhibit III-22. DEC guidance will play a much smaller role.

EXHIBIT III-16

FUTURE USE OF APPLICATION SOFTWARE PACKAGES OR DEVELOPMENT WORK

PLANNED USE	RESPONDENTS (Percent)
Upgrading or Replacing Present Applications	46
Use of a DBMS	19
Not Sure, But Some Work	16
No Plans or Expectations	19
TOTAL	100

EXHIBIT III-17

EXPENDITURES ANTICIPATED IN FIVE YEARS BY RESPONDENTS EXPECTING FUTURE WORK

Average Amount Anticipated by 81% of Respondents Expecting Work	\$96,800
Range of Expenditures Anticipated	Little to \$1,000,000
Total Expenditures	\$2,420,000

EXHIBIT III-18

ANALYSIS OF RESPONDENTS PLANNING EXPENDITURES (OVER \$99,000)

ANTICIPATED EXPENDITURES ABOVE \$99,000 (OVER 5 YEARS)	ALL RESPONDENTS (Percent)	AVERAGE EXPENDITURES (\$)
DEC Equipment is Main Computer	10	225,000
DEC Computer is Departmental	16	220,000
DEC Computer is Part of Mainframe Complex	19	360,416
TOTAL	45	280,500

EXHIBIT III-19

**ANALYSIS OF RESPONDENTS
PLANNING EXPENDITURES
(OVER \$199,000)**

ANTICIPATED EXPENDITURES OVER \$199,000	RESPONDENTS PLANNING EXPENDITURES (Percent)
DEC Equipment is Main Computer	6
DEC Computer is Departmental	13
DEC Computer is Part of Mainframe Complex*	13
TOTAL	32

*Top two expenditures planned are for this category.

EXHIBIT III-20

**ANALYSIS OF PLANNED
EXPENDITURES BY APPLICATION**

APPLICATION	RESPONDENTS PLANNING EXPENDITURES (Percent)
Accounting Related	42
Special Financial Areas	36
DBMS*	29
Other	14
TOTAL	121 *

*Two respondents mentioned DBMS as well as other areas (accounting and special financial) and are counted in both.

EXHIBIT III-21

**HOW WILL VENDORS BE SOUGHT
FOR NEW WORK**

MEANS	RESPONDENTS PLANNING NEW WORK (Percent)
Publications, Contacts, Meetings, DEC, Catalogs, and All Other Sources	44
Catalogs, Publications, Directories	16
Catalogs, Directories, and DEC	16
DEC Advice	4
Miscellaneous Including Consultant, Mailing, Personal Contacts	20

EXHIBIT III-22

SELECTION CRITERIA

CRITERIA TO BE USED	RESPONDENTS PLANNING WORK (Percent)
Price/Performance	44
Requirements or Needs	24
Test the Applications	12
Advice from DEC or DEC User Groups	8
Vendor Price and Support	4
Performance and Ease of Use	4
Not Sure	4
TOTAL	100



Appendix: Questionnaire



Appendix: Questionnaire

1. INPUT, an international planning firm, is conducting a study of DEC users to help improve the level of support offered to commercial users of DEC computing systems.

2. Does your area utilize a DEC computer for commercial applications?

Yes _____ No _____, terminate interview.

3. Could you help us? It will take about 7 or 8 minutes, and we will provide you with some of the exhibits from the study in return for your assistance.

Yes _____ No _____, terminate interview.

4a. What DEC model do you utilize? _____

4b. What complement of equipment do you have? _____

4c. What additional equipment do you anticipate adding?

5. Is your DEC computer (check the one that applies)

_____ part of a central computer complex that includes IBM mainframes.

_____ a departmental computer.

_____ the main computer of a company.

_____ other, obtain a description.

6. In what type of business or functional area is the DEC computer used (e.g., sales office for a pharmaceutical company)? _____

7. Why was the DEC computer obtained? (check the one that applies most)

_____ for a specific application (describe the application)

_____ for its equipment capabilities (ask what capabilities)

8. Could IBM have satisfied your need?

Yes _____ Why wasn't IBM chosen? _____

No _____

9. Did any other factors affect the selection of DEC?

Yes _____ No _____

If yes, what factors? _____

10. What commercial applications are being done on the DEC equipment?

11. How was system software obtained for your DEC computer?

a. From DEC _____ What software _____

b. From another vendor _____

Who _____

What software _____

How did you make contact with this vendor (e.g., through an ad, DEC, a letter, direct phone contact)?

c. What advantage did this vendor offer?

12. Will additional system software be obtained?

a. Yes _____ No _____

b. What kind of system software? _____

c. Has the vendor been selected?

No _____ (if no, go to question 13)

Yes _____ Can you tell us who that would be?

d. What factors will be involved in the selection of a vendor?

e. What dollar volume of system software might be obtained in the next 5 years?

13a. Did you develop all your own applications software?

No _____ Yes _____ (go to question 14)

13b. Were applications software packages obtained?

Yes _____ No _____ (If no, go to 13c)

From DEC _____ What applications? _____

What advantage(s) did this software offer?

Vendor application _____

Advantage _____

13c. Was development work done?

Yes _____ No _____ (go to question 14)

For what application(s)? _____

What vendor was involved? _____

How did you make contact with this vendor?

14. Will other applications software packages be obtained or development work be contracted for?

Yes _____ No _____ (go to question 16)

Packages or development work? _____

For what applications? _____

What vendors may be considered?

How will you find the vendors (e.g., we have the names and phone numbers; we will ask DEC; we will use directories, listing or advertisements)? _____

15. What will the selection criteria for new applications be?

16. What dollar volume of new application software do expect to obtain in the next 5 years?

17. Thank you for your assistance.



Appendix: Companies Interviewed



Appendix: Companies Interviewed

CNA Insurance
AH Harris & Sons
Teledyne Brown Engineering
G.E.
Southern New England Telephone
Dollar General Corp.
Fared Robot Systems
Chemical Bank
Longmant Foods
Information Associates
Sykes Datronics
First Union National Bank
Cytogen Inc.
DuPont
Bryan Memorial Hospital
TR Paul Inc.
Hardware Services Corp.
BASF Chemicals
Crane Plastics
AARP
Omnica
Kidder Peabody
Market Vision
Corliss Credit Services
Chase Manhattan Bank
Bergen Record
Marine Midland Bank
First Options of Chicago
Timken
Gessinger Systems
Mobil

